

# POLYPHENYLENE DERIVATIVE AND ORGANIC ELECTROLUMINESCENT ELEMENT USING POLYPHENYLENE DERIVATIVE

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**Applicant(s):** SONY CORP

**Classification:**

- **international:** *H01L51/50; C07C13/615; C07C15/16; C07C43/205; C09K11/06; H05B33/14; H05B33/22; H01L51/50; C07C13/00; C07C15/00; C07C43/00; C09K11/06; H05B33/14; H05B33/22; (IPC1-7): C07C13/615; C07C15/16; C07C43/205; C09K11/06; H05B33/14; H05B33/22*

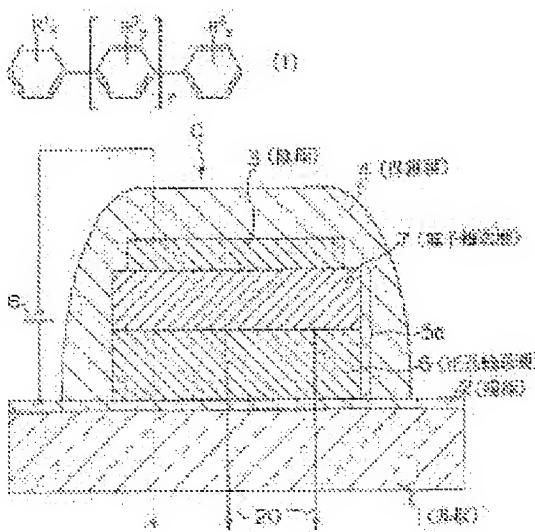
- **European:**

**Application number:** JP20020125222 20020426

**Priority number(s):** JP20020125222 20020426

## Abstract of JP 2003321403 (A)

**PROBLEM TO BE SOLVED:** To obtain a polyphenylene derivative which has high solubility in an organic solvent, low crystallinity, an excellent heat stability and a high fluorescence quantum efficiency and an organic electroluminescent element emitting high-luminance and high-efficiency blue luminescence. ; **SOLUTION:** The polyphenylene derivative is represented by general formula (1) ( $R<SP>1</SP>$ ,  $R<SP>2</SP>$  and  $R<SP>3</SP>$  may be the same or different and are each a hydrogen atom, a  $\leq 20$ C atomic group or group which may contain a substituent group;  $x$ ,  $y$  and  $z$  are each independently an integer of  $\leq 5$ ;  $n$  is an integer of  $\leq 8$ ). The organic electroluminescent element contains the polyphenylene derivative in an organic layer. ; **COPYRIGHT:** (C)2004,JPO



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(19) 日本国特許庁 (JP)

(12) 公開特許公報 (A)

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特開2003-321403

(P2003-321403A)

(43) 公開日 平成15年11月11日 (2003.11.11)

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C 07 C 13/615		C 07 C 13/615	3 K 0 0 7
15/16		15/16	4 H 0 0 6
43/205		43/205	C
C 09 K 11/06	6 1 0	C 09 K 11/06	6 1 0
	6 9 0		6 9 0

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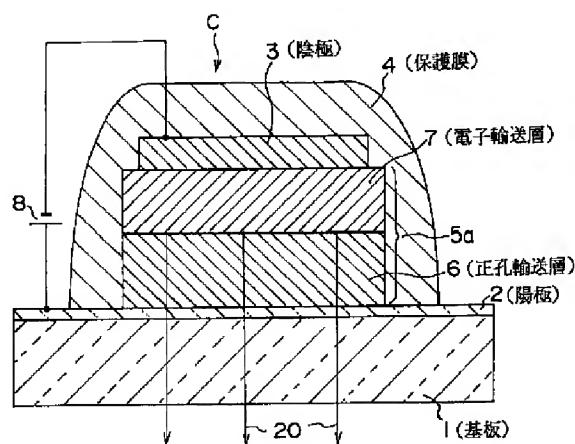
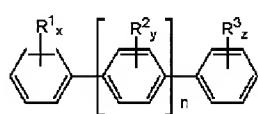
(74) 代理人 100076059

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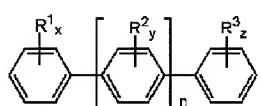
(54) 【発明の名称】 ポリフェニレン誘導体、及びポリフェニレン誘導体を用いた有機電界発光素子

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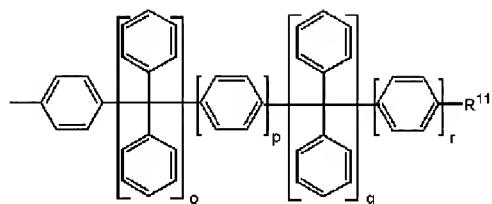
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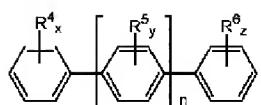
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—X—R<sup>7</sup>

$$\begin{array}{c} \text{R}^7 \\ | \\ \text{—Y—} \end{array}$$

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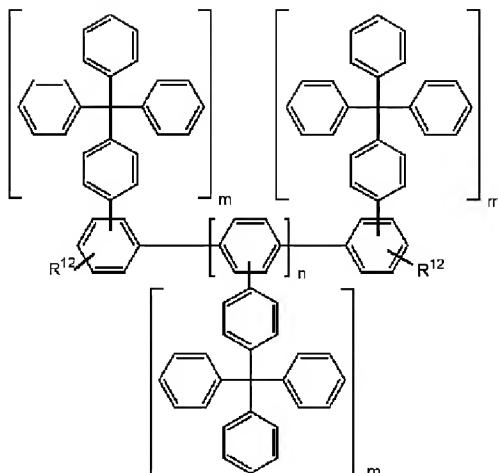
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—X—R<sup>7</sup>

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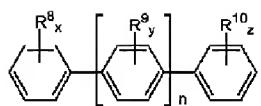
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—X—R<sup>7</sup>

$$\begin{array}{c} \text{R}^7 \\ | \\ \text{—Y—} \end{array}$$

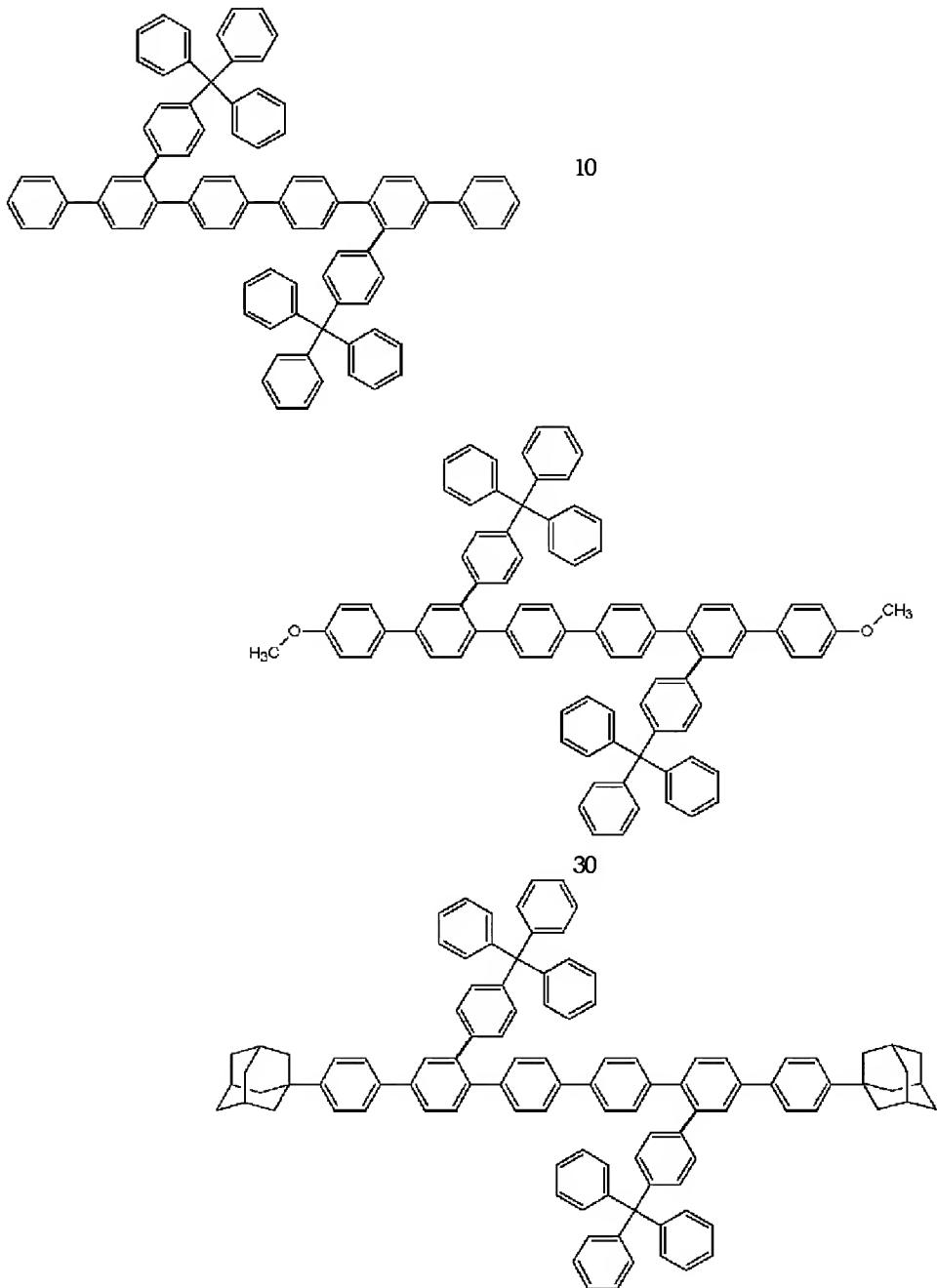
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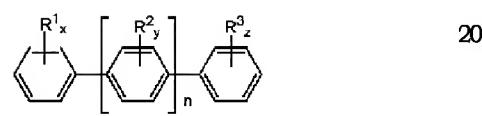
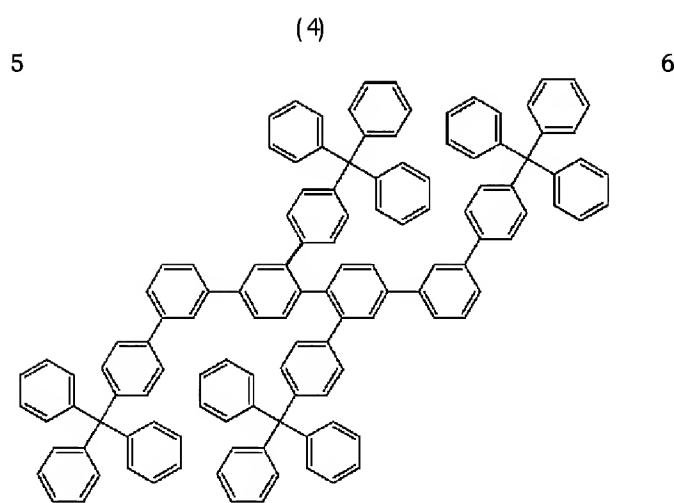
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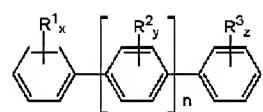
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Synthetic Metals 1997, 85, 1441



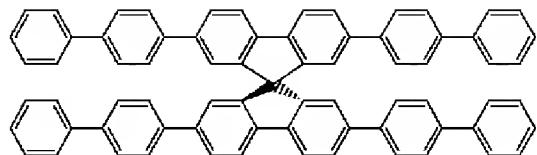
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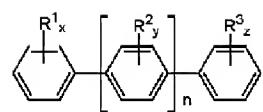
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Synthetic Metals( 1997) , 91, 209

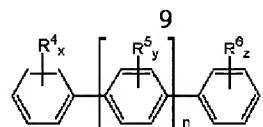


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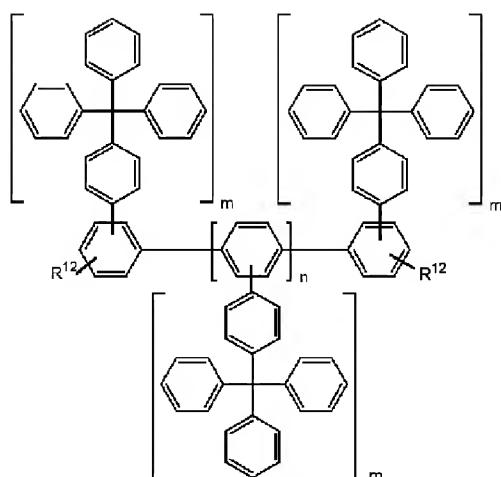
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—X—R<sup>7</sup>—Y—R<sup>7</sup>

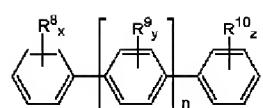
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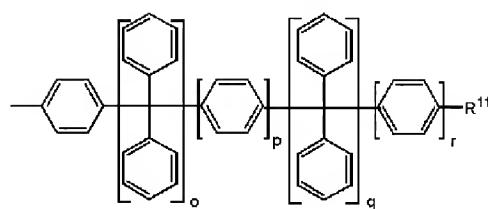
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—X—R<sup>7</sup>—Y—R<sup>7</sup>

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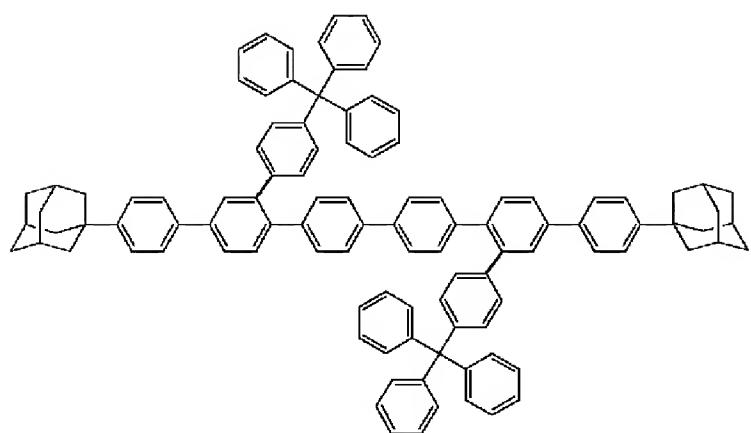
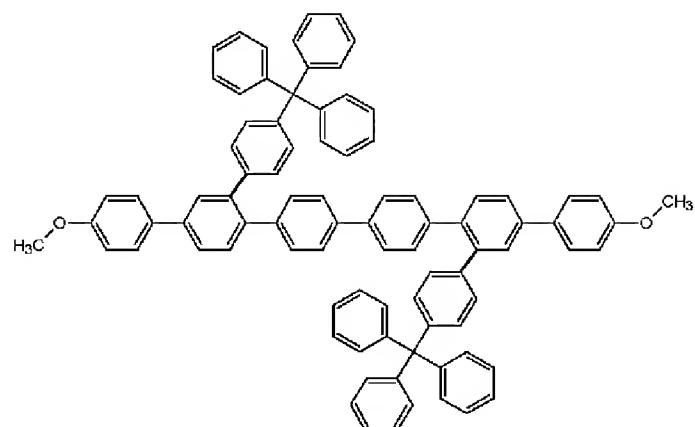
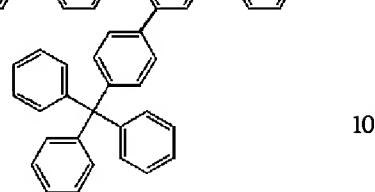
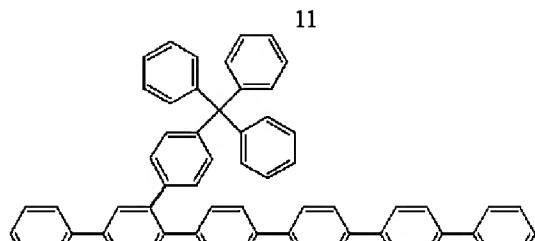
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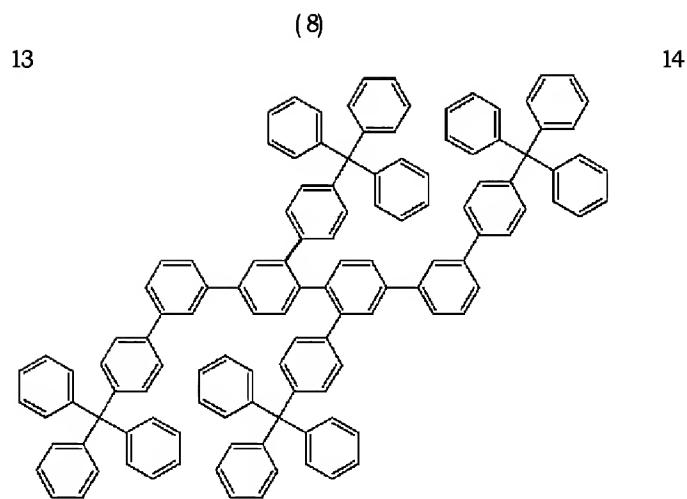
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Thin Film Transistors

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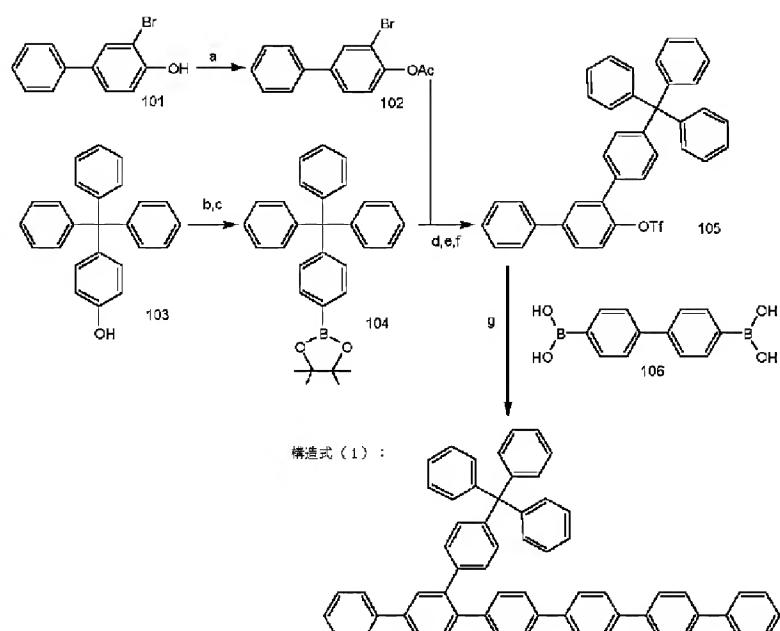
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## &lt;試薬及び反応条件&gt;

a:  $\text{Ac}_2\text{O}$ , pyr.,  $0^\circ\text{C}$   
 b:  $\text{Ti}_2\text{O}$ , pyr., r.t.  
 c: bis(pinacolato)diboron,  $\text{Pd}(\text{dpptf})\text{Cl}_2$ , DPPF,  $\text{KOAc}$ , dioxane,  $80^\circ\text{C}$   
 d: 105,  $\text{Pd}(\text{PPh}_3)_4$ ,  $\text{K}_2\text{CO}_3$ , Toluene- $\text{H}_2\text{O}$ ,  $80^\circ\text{C}$   
 e:  $\text{K}_2\text{CO}_3$ , MeOH, r.t.  
 f:  $\text{Ti}_2\text{O}$ , pyr., r.t.  
 g: 106,  $\text{Pd}(\text{PPh}_3)_4$ ,  $\text{K}_2\text{CO}_3$ , Toluene- $\text{H}_2\text{O}$

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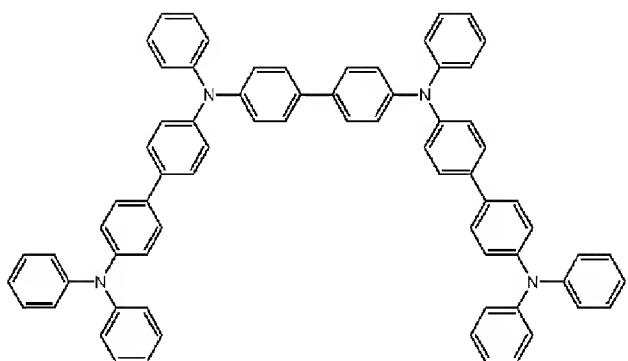
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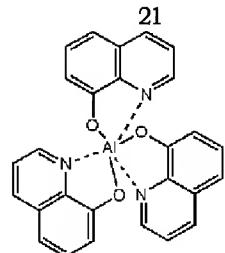
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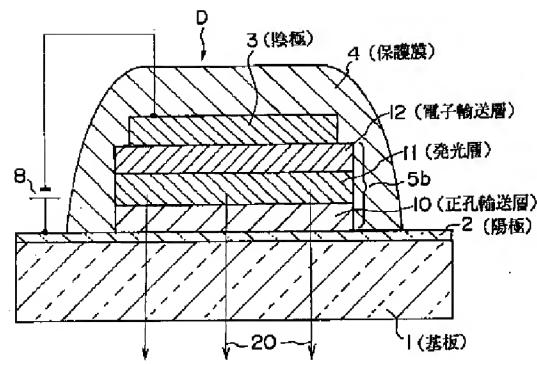
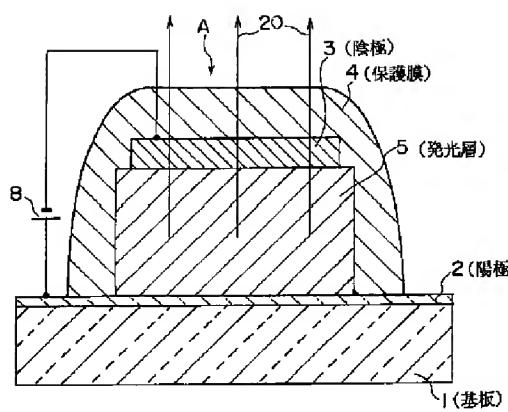


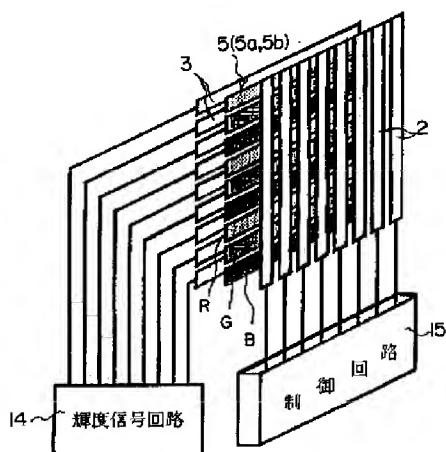
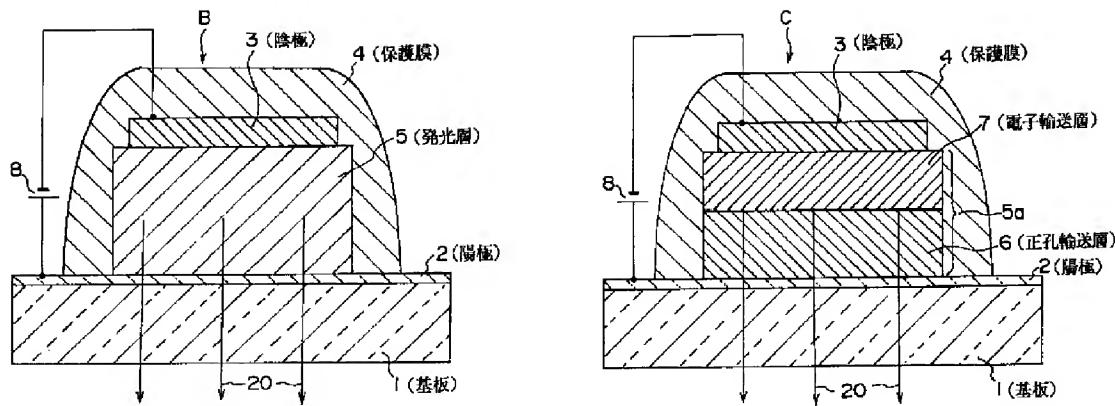
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( 51) Int. Cl. 7

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AB18 DE03  
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